BE | EXTC | VII (R) 27/5/13
Computer Communication Network

Con. 9370-13. **(REVISED COURSE)** **GS–5788**

(3 Hours) **[Total Marks : 100**

N.B. :(1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Illustrate answers with **sketches** wherever **required**.
(4) **Figures** to the **right** indicate marks.

Q. No. 1) [20]

a) Explain the difference between a connection oriented and connectionless service.
b) What is data transparency? Explain bit stuffing and destuffing.
c) What is collision and broadcast domain? How can they be reduced?.
d) Explain ALOHA and Slotted ALOHA.

Q. No. 2)

a) What does the term error control mean in data link layer? Explain Go back N and selective repeat ARQ protocols. [10]
b) Explain count to infinity problem with an example and a mèthod to avoid this Problem. [10]

Q. No. 3)

a) Compare circuit switching, packet switching and message switching in detail. [10]
b) Explain TCP header in detail. [10]

Q. No. 4)

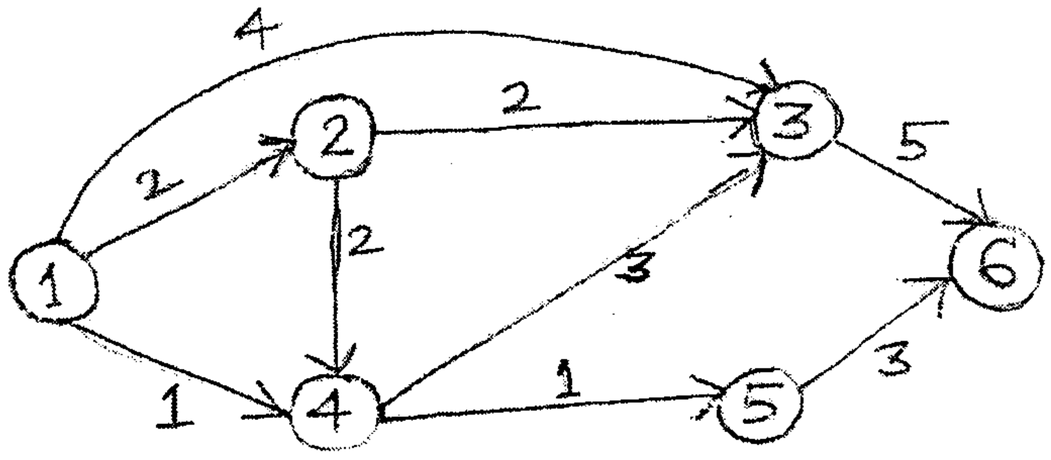
a) Explain in detail repeaters, hub, bridges, routers, gateway and switches. [10]
b) What is exterior and interior routing? Explain in brief distance vector routing and Link state routing. [10]

Q. No. 5)

a) Explain HDLC frame format. Describe configuration and response modes supported by HDLC protocol. [10]
b) Explain looping problem in bridge LAN with appropriate example. How to solve it. [10]

Q. No. 6)

a) Write a note on IEEE 802.3 standard in detail. [10]
b) Find the shortest path between the source node **1** to all other nodes for the network given below using Dijkstra's algorithm. Also draw the shortest path tree from node **1** to all other nodes. [10]



Q. No. 7) Write short notes (Any two): [20]

i) M/M/I model
ii) ARP and RARP
iii) ICMP

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